

What is claimed is:

1. An ink cartridge, comprising:
 - a housing defining a body of said cartridge;
 - an ink reservoir accommodated in said housing;
 - an opening formed on said housing, said opening communicating with said ink reservoir through a fluid path, said fluid path communicating with said opening at a decentered position of a bottom surface of said opening;
 - a stop to be fitted in said opening, said stop having elasticity and being configured such that a hollow needle can be penetrated therethrough; and
 - a valve structure provided to a part of said stop, said valve structure selectively opening and closing the communication between said opening and said ink reservoir, depending on a positional condition of said stop.
2. The ink cartridge according to claim 1, wherein said positional condition of said stop includes a position along an axis of said stop, and said stop is movably located at a first position where said stop is inserted intermediately in said opening and at a second position where said stop is deeply inserted in said opening.
3. The ink cartridge according to claim 2, wherein said valve structure includes a protrusion that is protruded from a bottom surface of said stop at a position corresponding to the decentered position where said opening communicates with said fluid path, said protrusion being fitted in said fluid path when said stop is fully inserted in said opening, said protrusion being spaced from said fluid path when said stop is located at an intermediate position along the axial direction thereof.
4. The ink cartridge according to claim 3, wherein said protrusion has a conical shape.
5. The ink cartridge according to claim 3, wherein said stop includes a barrel member fitted in said opening and a closing wall formed inside said barrel member to partially close said barrel member.
6. The ink cartridge according to claim 5, wherein said hollow needle can be penetrated through said closing member, and said protrusion is formed on an end of said barrel member to correspond to the decentered position.
7. An ink cartridge, comprising:
 - a housing defining a body of said cartridge;
 - an ink reservoir accommodated in said housing;

a first opening formed on said housing, said first opening communicating with said ink reservoir through a first fluid path;

a second opening formed on said housing, said second opening communicating with said ink reservoir through a second fluid path, said second fluid path communicating with said second opening at a decentered position of a bottom surface of said second opening;

a first stop to be fitted in said first opening, said first stop having elasticity, said first stop being configured such that a hollow needle can be penetrated therethrough;

a second stop to be fitted in said second opening, said second stop having elasticity, said second stop being configured such that a hollow needle can be penetrated therethrough;

a one-way valve provided between said first opening and said first fluid path, said one-way valve allowing a flow of fluid only in a direction from said ink reservoir to said first opening, the air inside said ink reservoir being evacuated through said first opening;

a valve structure provided to a part of said second stop, said valve structure selectively opening and closing the communication between said second opening and said ink reservoir through said second fluid path depending on a positional condition of said second stop.

8. The ink cartridge according to claim 7,

wherein said positional condition of said second stop includes a position along an axis of said second stop, and

wherein said second stop is movably located at a first position where said second stop is inserted intermediately in said second opening and at a second position where said second stop is deeply inserted in said second opening.

9. The ink cartridge according to claim 8, further comprising a connection member that connects end portions of said first stop and said second stop, said first stop, said second stop and said connection member forming an integral stop.

10. The ink cartridge according to claim 9, wherein a groove is formed between said first opening and said second opening, said groove being configured such that said connection member is fitted in said groove, a surface of said housing where said first and second openings are formed being substantially planar when said first stop and said second stop are fully inserted in said first opening and said second opening, respectively, and said connection member is fitted in said groove.

11. The ink cartridge according to claim 10, further including a protection film, said protection film being adhered on the surface where said first opening and said second opening are formed to cover said first opening and said second opening with said first stop, said second stop and said connection member fitted in said first opening, said second opening and said groove, respectively.

12. The ink cartridge according to claim 11, wherein opposing end portions of said protection film being bent toward said housing to define bent portions, said housing being formed with grooves capable of receiving said bent portions, said bent portions being accommodated in said grooves when said protection film is adhered on the surface where said first opening and said second opening are formed.

13. A method of filling an ink in an ink reservoir accommodated in an ink cartridge, the ink cartridge including a housing defining a body of the cartridge, an opening being formed on the housing, the opening communicating with the ink reservoir through a fluid path, the fluid path communicating with the opening at a decentered position of a bottom surface of the opening, a stop being provided to be fitted in the opening, the stop having elasticity, the stop being configured such that a hollow needle can be penetrated therethrough, a valve structure being provided to a part of the stop, the valve structure selectively opening and closing the communication between the opening and the ink reservoir depending on a positional condition of the stop, the method comprising:

- locating the stop at a position where the valve structure is opened;
- penetrating a hollow needle;
- supplying the ink to the ink reservoir through the hollow needle;
- removing the hollow needle from the stop; and
- locating the stop at a position where the valve structure is closed.

14. The method according to claim 13,
wherein the positional condition of the stop includes a position along an axis of the stop, and

wherein the stop is movably located at a first position where the stop is inserted intermediately in the opening and at a second position where the stop is deeply inserted in the opening.